UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

VIA CERTIFIED AND ELECTRONIC MAIL RETURN RECEIPT REQUESTED

Mr. Thomas Bottorf
Titanium Metals Corporation
100 Titanium Way
Toronto, Ohio 43964

Re: Self-Implementing On-site Cleanup and Disposal Notification for Polychlorinated Biphenyl (PCB) Remediation Waste at Titanium Metals Corporation – 100 Titanium Way, Toronto Ohio
EPA ID. No OHD098435134

Dear Mr. Bottorf:

The U.S. Environmental Protection Agency (EPA) has reviewed your revised Self-Implementing On-Site Cleanup and Disposal Notification of PCB Remediation Waste (Notification) pursuant to 40 CFR § 761.61(a) dated September 27, 2016. This Notification was submitted by Arcadis on behalf of Titanium Metals Corporation (TIMET), with your certification, on September 9, 2016. You submitted the Notification in accordance with Section 6 of the Toxic Substances Control Act, 15 U.S.C. § 2605, and the federal PCB regulations at 40 Code of Federal Regulations (C.F.R.) § 761.61(a)(3)(ii). EPA provided comments on the original Notification dated September 9, 2016, and determined that the revised Notification submitted on September 27, 2016 adequately addressed those comments. Therefore, based on the revisions provided, EPA approves the amended Notification.

Disposal of $\geq$ 50 mg/kg PCB impacted soils will be performed in accordance with 40 C.F.R. § 761.61(a)(5)(i)(B)(2)(iii). Disposal of $\leq$ 50 mg/kg PCB impacted soils will be performed in accordance with 40 C.F.R. § 761.61(a)(5)(i)(B)(2)(ii). This Approval does not constitute a determination by the EPA that the transporters or disposal facilities you select for this project are authorized to conduct the activities set forth in the Notification. You are responsible for ensuring that its selected transporters and disposal facilities are authorized to conduct these activities in accordance with all applicable federal, state, and local statutes and regulations.

The decontamination procedure for equipment varies from 40 CFR § 761.79(c)(2) and 40 CFR § 761 Subpart S, however 40 CFR § 761.79(h) stipulates that the Regional Administrator may authorize alternative procedures. The EPA has determined that the use of the

procedures identified in the Notification will not present an unreasonable risk to human health or the environment provided that the field demonstration and the PCB wipe samples to be used as verification samples meet all applicable decontamination criteria. In the event that the verification wipe samples do not meet the applicable decontamination criteria, TIMET will be required to use the methods identified in 40 CFR § 761.79(c)(2) and 40 CFR § 761 Subpart S.

TIMET is conducting this PCB cleanup as part of a larger remediation project done under the Ohio Environmental Protection Agency's (OEPA) Voluntary Action Program; you shall submit a Remedial Action Completion Report, upon completion of the remedial activities, to both OEPA and EPA. In addition, results of the field demonstration of the alternative decontamination method must be shared with both OEPA and EPA.

Any departure from the conditions of this approval letter and the remedial work plan as identified in the Notification must receive prior written authorization from the EPA, Land and Chemicals Division Director. This letter does not relieve you from compliance with any other federal, state or local regulation and does not preclude the EPA from initiating any enforcement action, including an action seeking civil penalties for any violation of federal regulations.

If you have any questions with regard to this Approval, please contact me or Brandon Pursel, of my staff, at (312)-353-9229 or pursel.brandon@epa.gov.

Sincerely,

Margaret M. Guerriero
Director
Land and Chemicals Division

cc: Joel Hunt (Arcadis)

ARCADIS Design & Consultancy for natural and built assets

Mr. Robert Kaplan
Acting Regional Administrator
c/o Peter Ramanauskas
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ENVIRONMENT

Subject:
Titanium Metals Corporation (TIMET)
Former Oil House/Maintenance Shop Area - Toronto, Ohio
USEPA ID # OHD098435134
Self-Implementing On-site Cleanup and Disposal Notification for PCB Remediation Waste

Date:
September 9, 2016

Contact:
Joel Hunt

Phone:
614.774.0632

Email:
Joel.hunt@arcadis.com

Our ref:
TIMETTOR.OHIO.0003A

Dear Mr. Kaplan:

This letter presents a self-implementing on-site cleanup and disposal notification for polychlorinated biphenyl (PCB) remediation waste (self-implementing notification) identified in the vicinity of the former maintenance shop/oil house at the Titanium Metals Corporation (TIMET) facility located in Toronto, Ohio (the site). This self-implementing notification is being submitted by TIMET in accordance with the Toxic Substances Control Act (TSCA) regulations presented in Title 40 of the Code of Federal Regulations (40 CFR) Part 761.61(a). PCBs have been identified and delineated in an area east of the Bar Mill, based on TIMET's sampling efforts in 2013, 2014, 2015 and 2016.

This self-implementing notification presents TIMET's approach for PCB cleanup and disposal activities in the former maintenance shop/oil house area at TIMET. In addition to this plan, TIMET is completing a site-wide remediation program to fulfill Resource Conservation and Recovery Act (RCRA) 2020 Corrective Action obligations. These obligations will be fulfilled through the Ohio Voluntary Action Program.

TIMET is performing an independent site-wide investigation and remediation to address all identified constituents of concern (COCs at the site under the Ohio Voluntary Action Program (VAP). Total petroleum and VOC impacts are co-located with PCB-impacted soil. Where COCs and PCBs are co-located and

above remedial standards in soil, the remedial excavation activities described in this self-implementing notification will serve to remediate both PCBs and co-located COCs.

The specific activities under the self-implementing notification include:

- Excavating shallow onsite soil (less than three feet) containing PCBs exceeding 25 parts per million (ppm);
- Managing wastes generated from soil excavation in accordance with PCB disposal requirements established under the TSCA regulations and any hazardous waste in accordance with Resource Conservation and Recovery Act (RCRA) regulations;
- Restoration of excavated areas;
- Application of use restrictions to areas above deeper soils exceeding 10 ppm but not exceeding 25 ppm and
- If necessary, application of use restrictions to areas above deeper soils exceeding 25 ppm but not exceeding 100 ppm using a cap and institutional control.

A signed Certification Statement which contains information required under 40 CFR 761.61(a)(3)(E) is included as **Attachment 1** to this letter.

In accordance with 40 CFR 761.61(a)(3)(ii), TIMET understands that the U.S. EPA may provide a written response to this Plan within 30 calendar days of receipt. If a written response is not received by TIMET within 30 days, TIMET can assume this Plan is complete and acceptable, and may proceed with the activities described herein.

Relevant background information, PCB characterization results, and a description of the proposed approach for managing residual PCBs in exterior soil is presented below.

BACKGROUND INFORMATION

The site is located at 100 Titanium Way in Toronto, Ohio. A site location map is presented as **Figure 1** and a layout of the facility is presented on **Figure 2**. The first known use of the property was reportedly for clay product manufacturing. First known ownership was by the Follansbee Brothers Company around 1919 for the manufacture of steel sheets. The property was sold in the late 1940s and renamed Ohio River Steel in 1951. TIMET acquired the Property in 1956 and began producing titanium products in 1957. Initial titanium production included two products: sheets as rolled on the hot mill; and forged, lathe turned billets.

The TIMET facility remains an active titanium metals processing plant. The facility produces intermediate and finished mill products from large ingots. Products include titanium billet, bar, sheet and rolled sheet. TIMET's operations at the site have been constantly improved but remain essentially unchanged since 1957, except for the discontinuation of both tubular product production and onsite coal/oil-fired boiler house use. Work pieces are conditioned to remove surface defects, oxidation and impurities. The conditioning includes abrasive grinding and blasting, machining, acid pickling and glass coating. Titanium pieces are further processed by hot rolling into sheets, plates, strips and bars. Pieces are custom cut to customers' specifications. Annealing is used to adjust metallurgical properties to meet customer specifications.

In June 2013, a site investigation was initiated. The investigation is being implemented pursuant to Ohio VAP Memorandum of Agreement requirements. During this investigation, PCB-impacted soil was discovered beneath asphalt in the former maintenance shop/oil house area, immediately outside and off the east wall of the Bar Mill as shown on Figure 2. Approximately 45 feet to the east of this area are active Norfolk and Southern railroad tracks that run north/south and bisect the facility property. This railroad property, including tracks, is fenced on both sides to restrict access..

Based upon aerial photographs and interviews, this delineated area of contamination was shown to include a footprint of a former maintenance shop/oil house. Use of the former maintenance shop/oil house is understood to have been discontinued sometime in the late 1960s, after process changes idled this operation. According to historical utility drawings, the former maintenance shop/oil house had been removed prior to 1974. No documented disposal of PCBs in this former area was identified, either before or since the former maintenance shop/oil house was removed.

Various utilities are present at depth beneath the impacted area. During one drilling session, a Geoprobe refused at two locations on a concrete surface, adjacent to the Bar Mill. This concrete was encountered at approximately four feet below ground surface (bgs). Demolition debris was also encountered in this area. Other borings encountered fill material to a depth of approximately 23 feet bgs. Fill material includes sand, silt, gravel, clay, bricks, rock fragments, cinders, and various mixtures of these materials.

The extent of PCB-impacted soil was fully delineated in June 2016 after multiple investigations since beginning in 2013 when the historic impact was first discovered. The PCB impacted area is in an area of low occupancy (40 CFR Part 761.3), and is currently vacant but being considered as a future location for a large compressed argon tank.

PCB CHARACTERIZATION RESULTS

PCB characterization sampling of soil was performed by TIMET during four events in 2013, 2014, 2015, and 2016.

Soil

Soil samples were obtained from multiple depths at 19 locations. PCB analytical results from soil samples are provided in **Table 1** (including the sample collection and analysis date for each sample). All soil sample locations that have been analyzed for PCBs in the former maintenance shop/oil house area are presented on **Figure 3**. PCB analytical results for detected Aroclors and the areas of PCB impacted soils are presented on **Figure 4.** The soil investigation activities have identified PCBs at a maximum concentration of 98 ppm (MW-8, 0-2').

Results of the PCB soil characterization efforts support the following conclusions:

- PCBs were identified at a concentration exceeding 25 ppm in four soil samples that were located beneath or adjacent to the former maintenance shop/oil house. The maximum PCB concentration was 98 ppm.
- Horizontal delineation of soil PCB concentrations at the site has been completed to a concentration of 1 ppm (SB-8B and SB-8C to the west; SB-17 to the north; SB-52, SB-53 and SB-54 to the east; and SB-5 and SB-54 to the south) or physical boundaries (Bar Mill to the west and railroad fence and

right-of way to the east). Vertical delineation of PCBs at the site has been completed to a concentration of 1 ppm (SB-48, SB-49, SB-50, SB-52, SB-53, SB-54, SB-01-14, SB-02-14, SB-04-14 and SB-05-14). The delineation efforts are sufficient to support selection of appropriate remedial actions for the Site.

Groundwater

Two groundwater wells (MW-8 and MW-8D) were installed beneath the impacted area, shown on **Figure 2**. The depth to groundwater is approximately 40 feet below ground surface. MW-8 is a shallow well with well screen straddling the water table. Groundwater results from two events (9/16/15 and 4/13/16) reported maximum PCB impact in MW-8 was 2.40 ug/L and in MW-8D was 1.04 ug/L. PCB impact has not been detected in any other site wells.

Results of PCB groundwater characterization activities conducted at the site support the following conclusion:

- Groundwater impact from former use of PCBs that ceased over 40 years ago is below potable use standards; and
- This self-implementing plan will mitigate significant future impacts to groundwater (approximately 40 feet bgs) by removal of PCB impacted soils.

PROJECT APPROACH

The overall objectives of the soil removal activities are to eliminate or mitigate to the extent practicable and feasible the potential for:

- Exposure to soil containing PCBs at concentrations exceeding applicable TSCA soil cleanup criteria; and
- Direct contact and inhalation of impacted soil by site workers and visitors.

Figure 4 provides a delineation of the PCB impacted area, an area immediately to the east, exterior of the Bar Mill. Within the impacted area, fill material beneath an existing asphalt surface are impacted with PCBs. This PCB impacted area is not in an area of high occupancy, and is currently vacant but being considered a future location for a large compressed argon tank.

Within the area delineated, two areas for excavation will be marked as shown on **Figure 4**. These include one larger area and one smaller area surrounding SB-02-14. The larger delineated area includes adjacent delineation sampling locations that were less than 25 ppm. The scope will be as follows:

- Delineate the soil excavation area and define boundaries using GPS locations. The boundaries will be located from the existing surveyed borings. These locations will also keep the excavation and the sampling documentation tied together so that analytical results are accurately reported for the location from which the sample was obtained. The limits of the excavation will also be surveyed to record the boundaries of the excavation.
- Remove the asphalt and segregate it into a separate roll-off(s) for recycling.

- Once the asphalt is removed, the soil below will be removed to a depth of three feet and placed in roll offs. These roll offs will be equipped with covers.
- Soil in the roll offs will be sampled and the roll offs placed in a designated roll off storage area, awaiting characterization results for proper management and disposal.
- The soil removal activities are designed to achieve appropriate PCB cleanup objectives for the PCB self-implementing disposal option as outlined in 40 CFR Part 761.61(a). The former maintenance shop/oil house area will achieve PCB cleanup objectives for bulk remediation waste in low occupancy areas as outlined in 40 CFR Part 761.61(a)(4)(i)(B). This area will be maintained as a low-occupancy use area in the future.

Excavated soil and debris (some asphalt chunks, possibly shallow PVC storm-water piping) will be placed in roll offs and transported offsite for disposal, based on PCB concentrations and possibly hazardous waste characteristics, after post excavation waste characterization activities are completed. Excavated asphalt will be placed in roll offs and either transported offsite for recycle or for disposal. Post-excavation waste characterization sampling will be conducted as required by permitted disposal facilities to confirm the site characterization results. The anticipated extent of soil removal activities (including designated excavation areas and their anticipated depth of removal) is identified on **Figure 4**.

Disposal

Soil and asphalt materials that contain PCBs at concentrations that are equal to or greater than 50 ppm (based on in-place sampling) will be transported for offsite disposal as a TSCA-regulated waste in accordance with the requirements of 40 CFR Part 761.61(a)(5)(i)(B)(2)(iii). Excavated soils with PCBs at concentrations equal to or greater than 100 ppm that also exceed RCRA characteristic hazardous waste threshold levels for ignitability or volatile organic constituents (potentially 1,1-dichloroethylene, trichloroethylene and 1,1,1-trichloroethylene) will be transported offsite (in accordance with RCRA alternative treatment standards for hazardous soil presented in 40 CFR Part 268.48 and .49) prior to land disposal as a PCB-regulated/RCRA hazardous waste. Per the requirements of regulations presented in 40 CFR Part 268.32, PCBs are not currently an underlying hazardous constituent requiring treatment for soils that exceed RCRA characteristic hazardous waste threshold levels for metals when PCB concentrations are below 1,000 ppm (based on sampling of as generated waste).

The soil removal activities will include:

- Mobilizing to the site and completing site preparation activities, including marking the two areas for excavation, construction of material staging areas, assembly of a temporary water wash area for equipment, and water (wash water, storm water from excavation area) containment in a tote or poly tank.
- Removing any asphalt layer from above the excavation area, breaking them into appropriate size for recycling or disposal, and placing these in roll-off(s). Removing any subgrade drain piping that may extend in this area.
- Excavating approximately 270 cubic yards (cy) (405 tons) of soil to an estimated depth of three feet from the two delineated areas and placing this soil in roll-offs. The proposed location of the storage area for the roll-offs is shown on **Figure 2**. Delineated soil is expected to be containing PCBs at

concentrations greater than 25 ppm to the limits shown on **Figure 4**. These limits will be confirmed by post-excavation sampling.

- The area including SB-01-14 and MW-8 and extending halfway to adjacent borings will be managed as PCB waste due to in-place PCB concentrations exceeding 50 ppm. Limits of this area will be confirmed by post-excavation sampling.
- Excavated soil generated by the remedial activities will be sampled and transported for offsite disposal as described above
- Dewatering: Due to the shallow nature of the excavation, groundwater is not expected to be encountered. In the event of any precipitation during excavation, any necessary dewatering will be done in the excavation. Method applied will be piling soil to an unearthed side of the delineated area and allowing the water to drain into the excavation. Once dewatered, the soil is then transferred into the roll-off currently being filled. Occasionally, it may be necessary to remove rainwater from the excavation hole. This water would be pumped into the wash water tote and managed in a contained area. Any water obtained in the excavation will be characterized and properly disposed following the procedures outlined in the Equipment Decontamination section of this Plan.
- Collecting a soil sample from a front loader bucket while loading soil, less than 50 ppm in place, into each roll off. Approximately one sample will be collected for each roll off that is filled (approximately 15 – 20 cy). Sampling in this manner meets the in-situ characterization data (i.e., "as found" per 40 CFR 761.61) rather than using post-excavation or demolition composite samples collected from waste piles or from roll-off containers. Waste characterization sampling will also include analytical required by permitted disposal facility requirements.
- Covering and moving the filled roll-off to the roll-off staging area while awaiting results. Following waste characterization sampling, these excavated materials will be properly labeled and managed for proper transport and disposal of the waste.
- Performing validation and verification samples of the excavation sidewalls and bottom from each of the two delineated areas and analyzing them for total PCBs, using SW-846 Method 8082a. Existing delineation sampling results will be used to satisfy post-excavation verification sampling requirements with limited additional post-excavation sampling of sidewalls and flooring which will also be conducted.
- Performing additional stepping out and excavating soil if any of these sidewall or floor sample results are above 25 ppm total PCBs. Additional excavating will include a stepping out of two feet from the sample point into all unexcavated areas. For example, if one sidewall sample is above 25 ppm, an additional soil volume four feet wide (two feet on either side of sample point) by two feet deep by three feet high would be removed. Verification sampling would include three sidewall samples and one floor sample.
- Backfilling and restoring asphalt surface cover for all areas disturbed by construction activities.
- Implementing institutional controls through the establishment of a Deed Notice to restrict future use of the site from non-residential purposes and identification of areas of low occupancy restrictions.

- Low-occupancy areas that contain PCBs at concentrations greater than 25 ppm and less than 100 ppm are not anticipated, but may occur. If concentrations greater than 25 ppm and less than 50 ppm remain in place following remediation, these will have an additional requirement of a barrier to secure the site (e.g. fence). If concentrations greater than 50 ppm and less than 100 ppm remain in place following remediation, these will have an additional requirement of an appropriate cap (i.e., a uniform cap of asphalt, concrete, or similar material of minimum thickness spread over the area where the PCB bulk remediation waste was left in place at concentrations greater than 25 ppm in order to prevent or minimize human exposure, infiltration of water, and erosion).

The Deed Notice for this property will clearly identify the areas that are restricted to low occupancy future use and identify the usage criteria. The low occupancy area comprises a non-occupied area that will either remain unoccupied, even if future use may locate bulk tanks for compressed gas service or have occasional use by very few workers (less than 6.7 hours per week per worker). There is restricted access in the form of property fencing that will prevent trespassers or personnel not employed at the facility from accessing the site. In addition, no anticipated future use of this area would involve the extended presence of personnel employed at the facility. If future use considerations change, TIMET may perform additional remedial actions as appropriate for the intended use.

Monitoring, maintenance, and evaluation of engineering and/or institutional controls following implementation of the soil remedial activities will include:

- Performing periodic site inspections at a minimum frequency of once per year to evaluate:
  - The presence of any excavations and other disturbance activities in restricted areas, and
  - The presence of any soil disturbances resulting in unacceptable exposures to soil impacts.
  - The deed notice and/or declaration of environmental restrictions, including all engineering controls, is being properly maintained, and
  - The remedial action that includes the deed notice and/or declaration of environmental restrictions continues to be protective of the public health and safety and the environment.

TIMET anticipates that soil remediation activities will begin in late-October 2016 if there is no delay in approval of this self-implementing notification. Completion of the soil remedial activities will require approximately one month and should be completed in November 2016 unless unfavorable weather conditions occur.

POST-EXCAVATION DOCUMENTATION SAMPLING

Existing delineation sampling results will be used to satisfy post-excavation verification sampling requirements with limited additional post-excavation sampling of sidewalls and flooring which will also be conducted.

TIMET proposes to collect documentation samples at a frequency of one sample per every approximately 900 (30' x 30' area) square feet of excavation bottom. Based on an overall excavation area of approximately 6,800 square feet, approximately 12 post-excavation verification samples (4 bottom and 8 sidewall locations, based on two excavation areas) will be collected. Documentation sample locations for the bottom of the excavation will be determined using a 30-foot by 30-foot sampling grid with the

dimensions of each grid cell modified based on the actual excavation configuration. One excavation bottom documentation grab sample will be collected at a depth of 0 to 6-inches at the approximate center of each sample grid. The documentation samples will be submitted to an Ohio VAP laboratory for laboratory analysis for total PCBs using USEPA SW-846 Method 8082a. Soil sample analytical results will be subjected to data validation.

Each post-excavation documentation sample will be analyzed as an individual discrete sample. Analytical results for discrete post-excavation samples will be compared to soil cleanup objectives. If any of the onsite documentation samples at the property contain PCBs at concentrations exceeding 25 ppm (the cleanup objective for subsurface bulk remediation materials not requiring either a fence or a cap in low occupancy areas), TIMET will either perform additional soil excavation or may elect to install a fence around the area or a cap over the excavation if post-excavation samples indicate that PCBs are present at concentrations exceeding 25 ppm and less than 100 ppm.

ALTERNATIVE DECONTAMINATION APPROACH

In addition to the self-implementing notice presented herein, TIMET is requesting a site-specific decontamination approval in accordance with 40 CFR Part 761.79(h) for the following activities related to the proposed remediation:

- Decontamination of construction equipment used to handle TSCA-regulated material prior to using the equipment to handle materials containing PCBs at concentrations less than 50 ppm prior to demobilization from the site.

The proposed site-specific decontamination procedures are described below.

Decontamination Procedures for Equipment Used to Handle TSCA-Regulated Soil

During implementation of the remedial activities, equipment that has been utilized to excavate or handle TSCA-regulated soil will be decontaminated prior to being utilized for handling materials containing PCBs at concentrations less than 50 ppm and prior to demobilization from the site. Decontamination will be required prior to:

- Moving equipment from a TSCA-regulated excavation area into the remedial support zone.
- Using equipment (excavator, front end loader, or other vehicle), that was previously used to handle TSCA-regulated material, to handle materials containing less than 50 ppm PCBs.
- Demobilizing equipment that was used to excavate or manage TSCA-regulated materials from the site.

Prior to managing materials containing less than 50 ppm PCBs or moving from the TSCA excavation area into the remedial support zone, all equipment that was previously used to excavate or handle TSCA-regulated material will be moved to a temporary decontamination pad (to be located in the work area) where the equipment will be cleaned with pressure washers to remove bulk material that could potentially contain PCBs. In situations where equipment is being re-positioned from a TSCA-regulated work area to a work area where PCB concentrations are less than 50 ppm, it will be necessary to decontaminate the entire piece of equipment, including tracks and equipment body. In situations where tracking of TSCA-regulated waste is not a concern, only the equipment surfaces that were previously in contact with TSCA-

regulated waste will be decontaminated. Equipment will be triple-rinsed and visually inspected to confirm the removal of adhered soil or other site materials. All solid waste materials generated during equipment decontamination will be collected and managed as TSCA waste until analytical results come back for waste characterization. All water generated by decontamination activities shall be captured in a tote or poly tank in proper containment. Once the water is sampled, characterized, and meets discharge permit limits, a request to the Toronto Ohio POTW will be made for permission to discharge. If analytical results exceed the POTW discharge limits, arrangements will be made so this water is properly transported offsite for treatment and disposal.

TIMET does not intend to collect wipe samples from each equipment item that is being re-positioned onsite or decontaminated between handling of TSCA regulated waste and materials containing less than 50 ppm PCBs. During the early phases of the project, a field demonstration test will be conducted to document that the decontamination method is sufficiently rigorous to reduce PCB concentrations on equipment surfaces. As part of the field demonstration, one set of standard PCB wipe samples (10-cm by 10-cm) collected following decontamination of equipment surfaces that were previously used to handle TSCA-regulated waste (i.e., excavator bucket and at least one other equipment surface in primary contact with TSCA-regulated sediment/soil) will be submitted for laboratory analysis in accordance with USEPA SW-846 method 8082. If PCBs are detected in the wipe samples at concentrations equal to or exceeding 10 ug/100 cm^2, TIMET will re-evaluate the decontamination approach and implement modifications as approved by the USEPA. If the demonstration samples indicate that the decontamination methods are adequate, then the pressure washing/triple rinse approach will be used for the duration of the project.

Prior to demobilization from the site, construction equipment used to excavate or handle TSCA-regulated waste will be moved from the work area (contamination zone) to a decontamination pad (located in the contaminant reduction zone) where the equipment will be cleaned with pressure washers to remove bulk material that could potentially contain PCBs. Equipment will be triple-rinsed and visually inspected to confirm the removal of adhered soil or other site materials. All solid waste materials generated during equipment decontamination will be collected and disposed of as TSCA waste

After the equipment is cleaned and prior to demobilization from the site, standard PCB wipe samples (10-centimeter [cm] by 10-cm, as defined in 40 CFR Part 761.123) will be collected from surfaces of the equipment that would have been in primary contact with the soil in the excavation areas (i.e., excavator bucket, excavator tracks, and excavator underbody). Wipe samples will be collected at a frequency of one sample per every 100 square feet of equipment surface area, with a maximum of three samples for any individual piece of equipment. The wipe samples will be submitted for laboratory analysis in accordance with USEPA SW-846 Method 8082a. If PCBs are detected for any of the wipe samples at concentrations equal to or exceeding 10 µg/100 cm^2, the portion of the equipment represented by that sample will be pressure washed again and additional samples will be collected until acceptable wipe sample results are achieved. Once acceptable wipe sampling results are obtained for the equipment, it will be demobilized from the site.

TIMET appreciates the USEPA's efforts with respect to this self-implementing Notification and Alternative Decontamination Approval Request. Please do not hesitate to contact Mr. Tom Bottorf (740.537.5672) or the undersigned at 614.774.0632 if you have any questions or require additional information.

Sincerely,

Arcadis U.S., Inc.

Joel A. Hunt
Principal Scientist

Copies:
C. Butler, Director of Ohio EPA
F. Petrola, Jefferson County Health Commissioner
R. Pfarrer, TIMET
T. Bottorf, TIMET

Enclosures:

Tables

1 Soil Analytical Results for Detected PCBs in Former Maintenance Shop/Oil House Area

Figures

1 Site Location Map
2 Site Layout Map And Proposed Roll-Off Storage Area
3 PCB Delineation Boring Locations
4 PCB Delineation Results and Proposed Excavation Boundaries
5 Expected Low-Occupancy Area Boundary

Attachments

1 Self-Implementation Plan Certification

TABLES

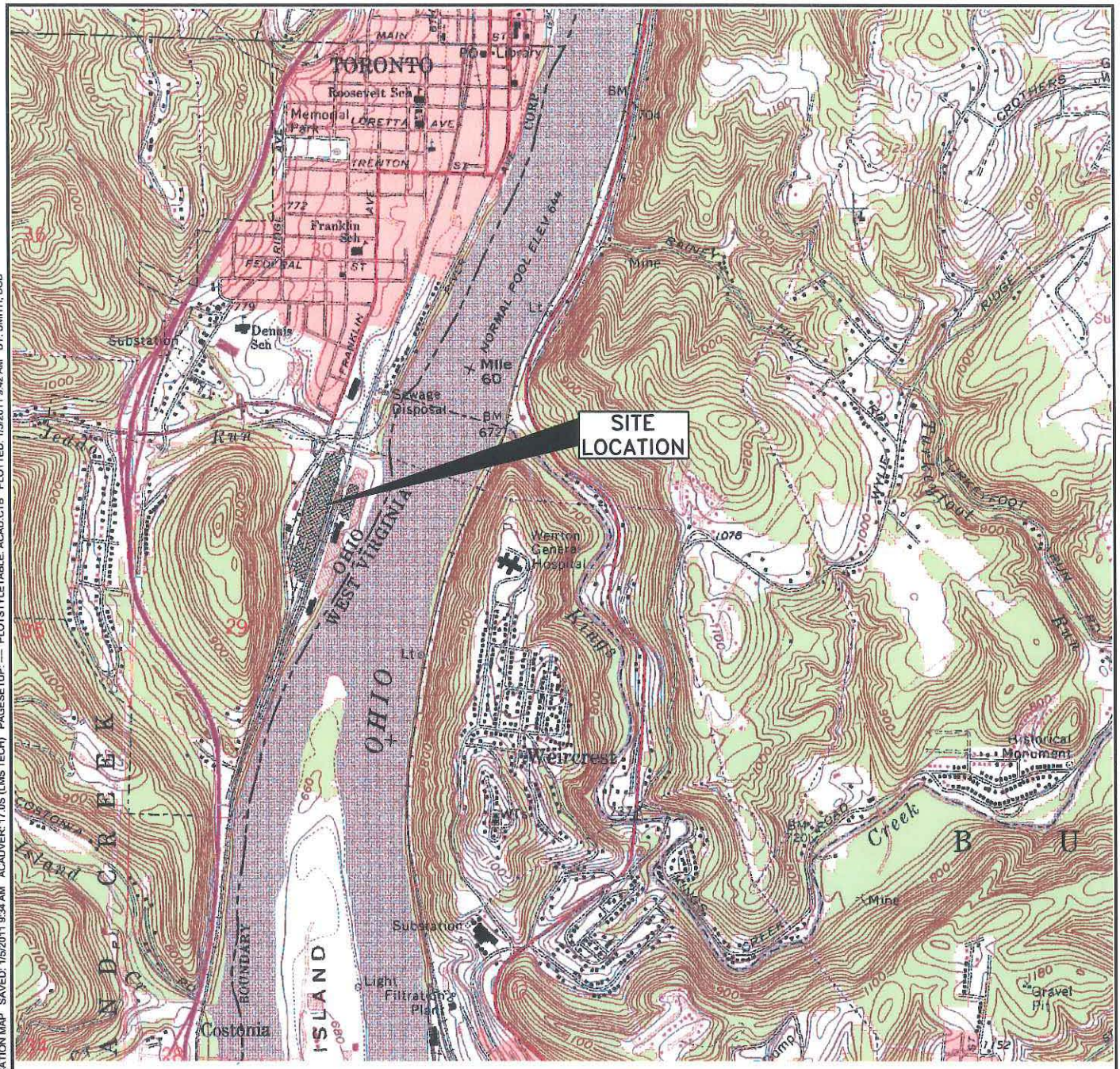
Table 1
Soil Analytical Results for Detected PCBs in Former Maintenance Shop/Oil House Area

ARCADIS Design & Consultancy for natural and built assets

Location	Sample Name	Depth Interval	Analytical Date	Sample Date	Aroclor 1248	Aroclor 1254	Aroclor 1260
MW-08	MW-08(0-2)	0-2	10/21/2013	10/7/2013	< 18.8	**98**	< 18.8
MW-8A	MW-8A(2-3)	2-3	6/22/2016	6/14/2016	< 3.54 U	15.4	< 3.54 U
MW-8A	MW-8A(5-6)	5-6	6/22/2016	6/14/2016	< 3.7 U	11.5	< 3.7 U
MW-8A	MW-8A(12-14)	12-14	6/22/2016	6/14/2016	< 0.0375 U	< 0.0375 U	< 0.0375 U
MW-8B	MW-8B(2-3)	2-3	6/22/2016	6/14/2016	< 0.0385 U	< 0.0385 U	0.107
MW-8B	MW-8B(4-5)	4-5	6/22/2016	6/14/2016	< 0.397 U	< 0.397 U	3.69
MW-8C	MW-8C(2-3)	2-3	6/22/2016	6/14/2016	< 0.0357 U	< 0.0357 U	0.123
MW-08D	MW-08D(15-17)	15-17	10/18/2013	10/8/2013	< 3.71 U	19.1	< 3.71 U
MW-08D	MW-08D(4-6)	4-6	10/21/2013	10/8/2013	< 3.71 U	< 3.71 U	15.7
SB-01-14	SB-01-14(0-2)	0-2	6/4/2014	5/28/2014	< 20.2 U	**87.3**	< 20.2 U
SB-01-14	SB-01-14(10-12)	10-12	6/4/2014	5/28/2014	1.61	< 0.395 U	1.37
SB-01-14	SB-01-14(23-25)	23-25	6/4/2014	5/28/2014	< 0.0356 U	< 0.0356 U	< 0.0356 U
SB-02-14	SB-02-14(0-2)	0-2	6/4/2014	5/28/2014	< 3.5 U	15.7	< 3.5 U
SB-02-14	SB-02-14(10-12)	10-12	6/4/2014	5/28/2014	< 0.0388 U	0.0182 J	< 0.0388 U
SB-02-14	SB-02-14(20-22)	20-22	6/4/2014	5/28/2014	< 0.0358 U	< 0.0358 U	< 0.0358 U
SB-02-14	SB-02-14(23-25)	23-25	6/4/2014	5/28/2014	< 0.0351 U	< 0.0351 U	< 0.0351 U
SB-03-14	DUP01_05282014	8-10	6/4/2014	5/28/2014	< 0.0388 U	0.0759	< 0.0388 U
SB-03-14	SB-03-14(0-2)	0-2	6/4/2014	5/28/2014	< 1.83 U	11.1	< 1.83 U
SB-03-14	SB-03-14(23-25)	23-25	6/4/2014	5/28/2014	< 0.0354 U	< 0.0354 U	< 0.0354 U
SB-03-14	SB-03-14(8-10)	8-10	6/4/2014	5/28/2014	< 0.0375 U	0.0621	< 0.0375 U
SB-04-14	SB-04-14(0-2)	0-2	6/4/2014	5/28/2014	< 17.3 U	**64.1**	< 17.3 U
SB-04-14	SB-04-14(23-25)	23-25	6/4/2014	5/28/2014	< 0.0349 U	< 0.0349 U	< 0.0349 U
SB-04-14	SB-04-14(3-5)	3-5	6/4/2014	5/28/2014	< 0.0373 U	0.0759	< 0.0373 U
SB-05	SB-05(0-2)	0-2	10/10/2013	10/1/2013	< 0.0346 U	< 0.0346 U	< 0.0346 U
SB-05-14	DUP02_05282014	4-5	6/4/2014	5/28/2014	< 0.0819 U	0.288	< 0.0819 U
SB-05-14	SB-05-14(0-2)	0-2	6/4/2014	5/28/2014	< 3.6 U	**29**	< 3.6 U
SB-05-14	SB-05-14(23-25)	23-25	6/4/2014	5/28/2014	< 0.0348 U	0.143	< 0.0348 U
SB-05-14	SB-05-14(4-5)	4-5	6/4/2014	5/28/2014	< 0.0415 U	0.161	< 0.0415 U
SB-17	SB-17(0-2)	0-2	10/11/2013	10/1/2013	< 0.169 U	0.653	< 0.169 U
SB-48	SB-48(0-2)	0-2	9/10/2015	9/2/2015	< 2.04 U	14.4	< 2.04 U
SB-48	SB-48(30-32)	30-32	9/10/2015	9/2/2015	< 0.0349 U	< 0.0349 U	< 0.0349 U
SB-48	SB-48(6-8)	6-8	9/10/2015	9/2/2015	< 0.0381 U	< 0.0381 U	< 0.0381 U
SB-49	SB-49(0-2)	0-2	9/12/2015	9/4/2015	< 0.0362 U	< 0.0362 U	0.0195 J
SB-49	SB-49(27-29)	27-29	9/12/2015	9/4/2015	< 0.0368 U	< 0.0368 U	< 0.0368 U
SB-49	SB-49(8-10)	8-10	9/14/2015	9/4/2015	< 0.0790 U	< 0.0790 U	< 0.0790 U
SB-50	SB-50(0-2)	0-2	9/10/2015	9/3/2015	< 0.715 U	9.6	< 0.715 U
SB-50	SB-50(27-29)	27-29	9/10/2015	9/3/2015	< 0.0362 U	< 0.0362 U	< 0.0362 U
SB-50	SB-50(6-8)	6-8	9/10/2015	9/3/2015	< 0.202 U	< 0.202 U	< 0.202 U
SB-51	SB-51(0-2)	0-2	9/17/2015	9/8/2015	< 0.0352 U	< 0.0352 U	0.0276 J
SB-51	SB-51(34-36)	34-36	9/17/2015	9/8/2015	< 0.0349 U	0.124 p	< 0.0349 U
SB-51	SB-51(8-10)	8-10	9/17/2015	9/8/2015	< 0.0400 U	0.0734	< 0.0400 U
SB-52	SB-52(0-2)	0-2	9/12/2015	9/3/2015	< 0.0362 U	0.217	< 0.0362 U
SB-52	SB-52(27-29)	27-29	9/12/2015	9/3/2015	< 0.0347 U	< 0.0347 U	< 0.0347 U
SB-52	SB-52(8-10)	8-10	9/12/2015	9/3/2015	< 0.0380 U	< 0.0380 U	< 0.0380 U
SB-53	SB-53(0-2)	0-2	9/12/2015	9/4/2015	< 0.181 U	1.63	< 0.181 U
SB-53	SB-53(27-29)	27-29	9/12/2015	9/4/2015	< 0.0355 U	< 0.0355 U	< 0.0355 U
SB-53	SB-53(4-6)	4-6	9/12/2015	9/4/2015	< 0.0400 U	0.0534	< 0.0400 U
SB-54	SB-54(0-2)	0-2	9/17/2015	9/8/2015	< 0.0389 U	0.0664	< 0.0389 U
SB-54	SB-54(29-31)	29-31	9/18/2015	9/8/2015	< 0.0398 U	0.0256 J	< 0.0398 U
SB-54	SB-54(8-10)	8-10	9/18/2015	9/8/2015	< 0.0387 U	< 0.0387 U	< 0.0387 U

Bold values exceed VAP commercial/industrial direct contact standards.
Shaded Values exceed VAP construction/excavation worker direct contact standards.
All values shown in milligrams per kilogram.

FIGURES



SCALE 1:24 000

1 1/2 0 1

SCALE IN MILE

1000 0 1000 2000 3000 4000 5000 6000 7000

SCALE IN FEET: 1" = 2000'

N

OHIO QUADRANGLE LOCATION

REFERENCE: USGS 7.5 MINUTE QUADRANGLE; WEIRTON WEST VIRGINA, PENNSYLVANIA, OHIO 1968, PHOTOREVISED 1990

TIMET
TORONTO, OHIO

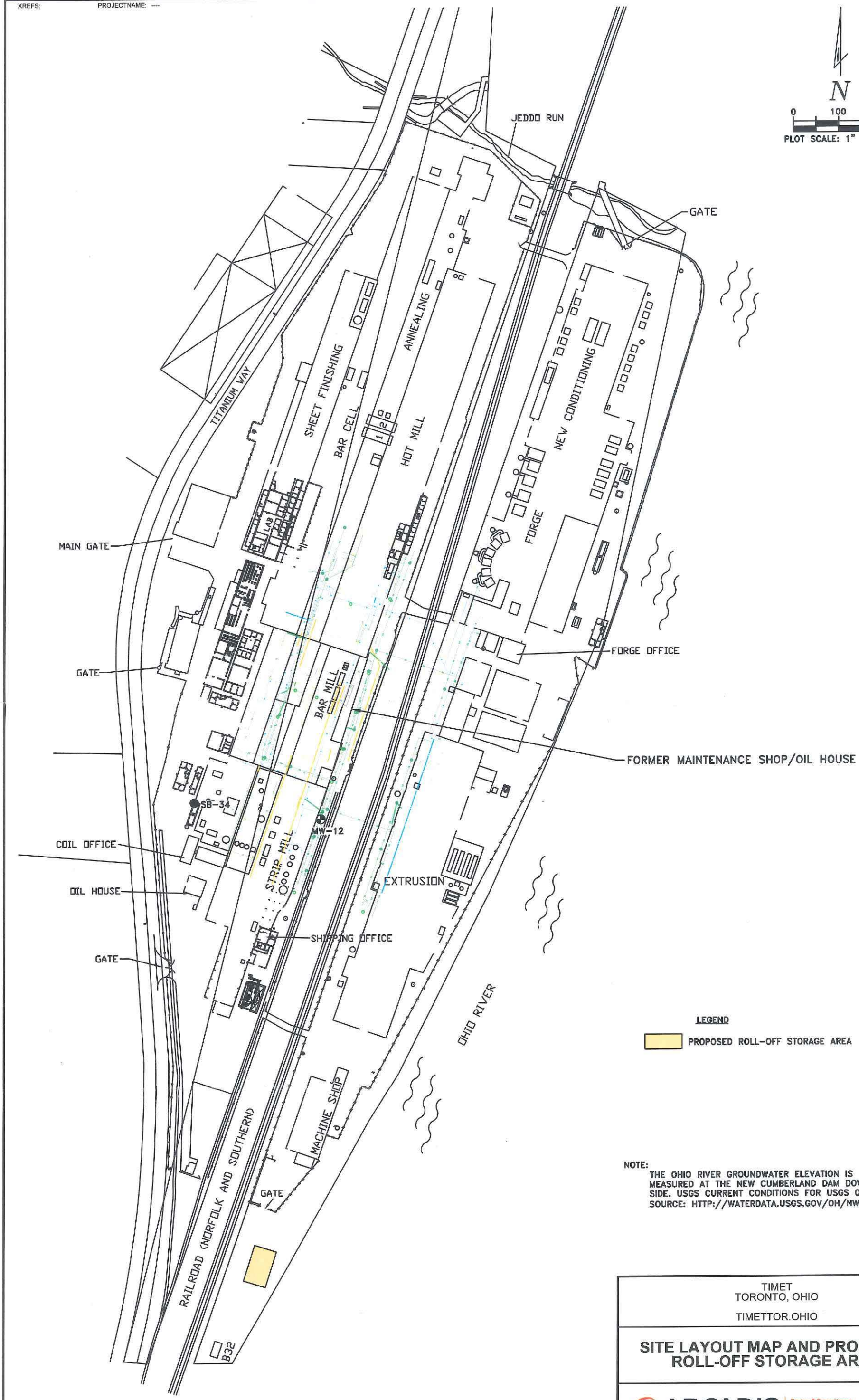
OH001098.0001

SITE LOCATION MAP

ARCADIS

FIGURE 1

CITY:(COLUMBUS, OHIO) DIV/GROUP:(ENV) DB:(R. SMITH) LD:(Opt) PIC:(Opt) PM:(N. GILLOTTI) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Columbus-OH\ACT\TIMETTOR - TIMET-FORMER OH001098\TIMETTOR-2016-05.dwg LAYOUT: FIG 2 SL-ROLLOFF-LOCATION SAVED: 8/24/2016 9:03 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ACAD.CTB PLOTTED: 8/24/2016 9:03 AM BY: SMITH, BOB
XREFS: PROJECTNAME: ----



LEGEND

PROPOSED ROLL-OFF STORAGE AREA

NOTE:
THE OHIO RIVER GROUNDWATER ELEVATION IS 644.7 MEASURED AT THE NEW CUMBERLAND DAM DOWN STREAM SIDE. USGS CURRENT CONDITIONS FOR USGS 03110690 SOURCE: HTTP://WATERDATA.USGS.GOV/OH/NWIS

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SITE LAYOUT MAP AND PROPOSED ROLL-OFF STORAGE AREA

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2

CITY:(COLUMBUS, OHIO) DIV/GROUP:(ENV) DB:(R. SMITH) LD:(Opt) PIC:(Opt) PM:(N. GILLOTTI) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Columbus-OH\ACT\TIMETTOR - TIMET-FORMER OH001098\TIMETTOR-2016-02.dwg LAYOUT: FIG 3 PCB SAMPLES SAVED: 8/12/2016 3:04 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ACAD.CTB PLOTTED: 8/24/2016 9:05 AM BY: SMITH, BOB
XREFS: PROJECTNAME: ----

SB-02-14 (5/2014)
SB-49 (9/2015)
SB-8C (6/2016)
SB-01-14 (5/2014)
SB-8B (6/2016)
MW-8 (9/2013)
SB-8A (6/2016)
MW-8D (9/2013)
SB-05-14 (5/2014)
SB-51 (9/2015)
SB-5 (10/2013)
SB-17 (10/2013)
SB-48 (9/2015)
SB-03-14 (5/2014)
SB-50 (9/2015)
SB-04-14 (5/2014)
SB-52 (9/2015)
SB-53 (9/2015)
SB-54 (10/2013)
PW-2
STRIP MILL

LEGEND

- MONITORING WELL (SHALLOW)
- MONITORING WELL (DEEP)
- PRODUCTION WELL
- SOIL BORING
- GAS LINE
- STORM SEWER
- SANITARY SEWER
- WATER LINE
- (10/2013) MONTH/YEAR BORING COMPLETED

N

0 25 50 FT

PLOT SCALE: 1" = 50'

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PCB DELINEATION BORING LOCATIONS

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FIGURE 3

CITY:(COLUMBUS, OHIO) DIV/GROUP:(ENV) DB:(R. SMITH) LD:(Opt) PIC:(Opt) PM:(N. GILLOTTI) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Columbus-OH\ACT\TIMETTOR - TIMET-FORMER OH001098\TIMETTOR-2016-02.dwg LAYOUT: FIG 4 PCB-DATA-EXCAVATION SAVED: 8/24/2016 9:25 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ACAD.CTB PLOTTED: 8/24/2016 9:26 AM BY: SMITH, BOB
XREFS:

SB-02-14 (5/28/2014)				
	0-2'	10-12'	20-22'	23-25'
Aroclor 1248	< 3.5 U	< 0.0388 U	< 0.0358 U	< 0.0351 U
Aroclor 1254	**15.7**	**0.0182 J**	< 0.0358 U	< 0.0351 U
Aroclor 1260	< 3.5 U	< 0.0388 U	< 0.0358 U	< 0.0351 U

SB-49 (9/4/2015)			
	0-2'	8-10'	27-29'
Aroclor 1248	< 0.0362 U	< 0.0790 U	< 0.0368 U
Aroclor 1254	< 0.0362 U	< 0.0790 U	< 0.0368 U
Aroclor 1260	**0.0195 J**	< 0.0790 U	< 0.0368 U

MW-08 (10/7/2013)			
	0-2'	2-4'	10-12'
Aroclor 1248	< 18.8	NA	NA
Aroclor 1254	**98**	NA	NA
Aroclor 1260	< 18.8	NA	NA

SB-8C (6/14/2016)	
	2-3'
Aroclor 1248	< 0.0357 U
Aroclor 1254	< 0.0357 U
Aroclor 1260	**0.123**

SB-01-14 (5/28/2014)			
	0-2'	10-12'	23-25'
Aroclor 1248	< 20.2 U	**1.61**	< 0.0356 U
Aroclor 1254	**87.3**	< 0.395 U	< 0.0356 U
Aroclor 1260	< 20.2 U	**1.37**	< 0.0356 U

SB-8B (6/14/2016)		
	2-3'	4-5'
Aroclor 1248	< 0.0385 U	< 0.397 U
Aroclor 1254	< 0.0385 U	< 0.397 U
Aroclor 1260	**0.107**	**3.69**

SB-8A (6/14/2016)			
	2-3'	5-6'	12-14'
Aroclor 1248	< 3.54 U	< 3.7 U	< 0.0375 U
Aroclor 1254	**15.4**	**11.5**	< 0.0375 U
Aroclor 1260	< 3.54 U	< 3.7 U	< 0.0375 U

MW-08D (10/8/2013)		
	4-6'	15-17'
Aroclor 1248	< 3.71 U	< 3.71 U
Aroclor 1254	< 3.71 U	**19.1**
Aroclor 1260	**15.7**	< 3.71 U

SB-51 (9/8/2015)			
	0-2'	8-10'	34-36'
Aroclor 1248	< 0.0352 U	< 0.0400 U	< 0.0349 U
Aroclor 1254	< 0.0352 U	**0.0734**	**0.124 p**
Aroclor 1260	**0.0276 J**	< 0.0400 U	< 0.0349 U

SB-05 (10/1/2013)		
	0-2'	8-10'
Aroclor 1248	< 0.0346 U	NA
Aroclor 1254	< 0.0346 U	NA
Aroclor 1260	< 0.0346 U	NA

SB-17 (10/1/2013)	
	0-2'
Aroclor 1248	< 0.169 U
Aroclor 1254	**0.653**
Aroclor 1260	< 0.169 U

SB-03-14 (5/28/2014)			
	0-2'	8-10'	23-25'
Aroclor 1248	< 1.83 U	< 0.0375 U	< 0.0354 U
Aroclor 1254	**11.1**	**0.0621**	< 0.0354 U
Aroclor 1260	< 1.83 U	< 0.0375 U	< 0.0354 U

SB-48 (9/2/2015)			
	0-2'	6-8'	30-32'
Aroclor 1248	< 2.04 U	< 0.0381 U	< 0.0349 U
Aroclor 1254	**14.4**	< 0.0381 U	< 0.0349 U
Aroclor 1260	< 2.04 U	< 0.0381 U	< 0.0349 U

SB-50 (9/3/2015)			
	0-2'	6-8'	27-29'
Aroclor 1248	< 0.715 U	< 0.202 U	< 0.0362 U
Aroclor 1254	**9.6**	< 0.202 U	< 0.0362 U
Aroclor 1260	< 0.715 U	< 0.202 U	< 0.0362 U

SB-04-14 (5/28/2014)			
	0-2'	3-5'	23-25'
Aroclor 1248	< 17.3 U	< 0.0373 U	< 0.0349 U
Aroclor 1254	**64.1**	**0.0759**	< 0.0349 U
Aroclor 1260	< 17.3 U	< 0.0373 U	< 0.0349 U

SB-52 (9/3/2015)			
	0-2'	8-10'	27-29'
Aroclor 1248	< 0.0362 U	< 0.0380 U	< 0.0347 U
Aroclor 1254	**0.217**	< 0.0380 U	< 0.0347 U
Aroclor 1260	< 0.0362 U	< 0.0380 U	< 0.0347 U

SB-05-14 (5/28/2014)			
	0-2'	4-5'	23-25'
Aroclor 1248	< 3.6 U	< 0.0415 U	< 0.0348 U
Aroclor 1254	**29**	**0.161**	**0.143**
Aroclor 1260	< 3.6 U	< 0.0415 U	< 0.0348 U

SB-53 (9/4/2015)			
	0-2'	4-6'	27-29'
Aroclor 1248	< 0.181 U	< 0.0400 U	< 0.0355 U
Aroclor 1254	**1.63**	**0.0534**	< 0.0355 U
Aroclor 1260	< 0.181 U	< 0.0400 U	< 0.0355 U

SB-54 (9/8/2015)			
	0-2'	8-10'	29-31'
Aroclor 1248	< 0.0389 U	< 0.0387 U	< 0.0398 U
Aroclor 1254	**0.0664**	< 0.0387 U	**0.0256 J**
Aroclor 1260	< 0.0389 U	< 0.0387 U	< 0.0398 U

SB-17
SB-02-14
SB-49
SB-8C
SB-48
SB-03-14
SB-8B
SB-01-14
MW-8
MW-8D
SB-50
SB-8A
SB-04-14
SB-05-14
SB-52
SB-51
SB-53
SB-54
SB-5

N

0 10 20 FT
PLOT SCALE: 1" = 20'

LEGEND

- MONITORING WELL (SHALLOW)
- MONITORING WELL (DEEP)
- PRODUCTION WELL
- SOIL BORING
- EXCAVATION AREA – PCBs>10ppm
- TSCA EXCAVATION AREA – PCBs>50ppm

SB-05 (10/1/2013) — SAMPLE IDENTIFICATION (DATE)
0-2' — DEPTH OF SAMPLE IN FEET

BOLD — CONCENTRATION EXCEEDS ACTION LEVELS

ALL CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (mg/kg)

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PCB DELINEATION RESULTS AND PROPOSED EXCAVATION BOUNDARY

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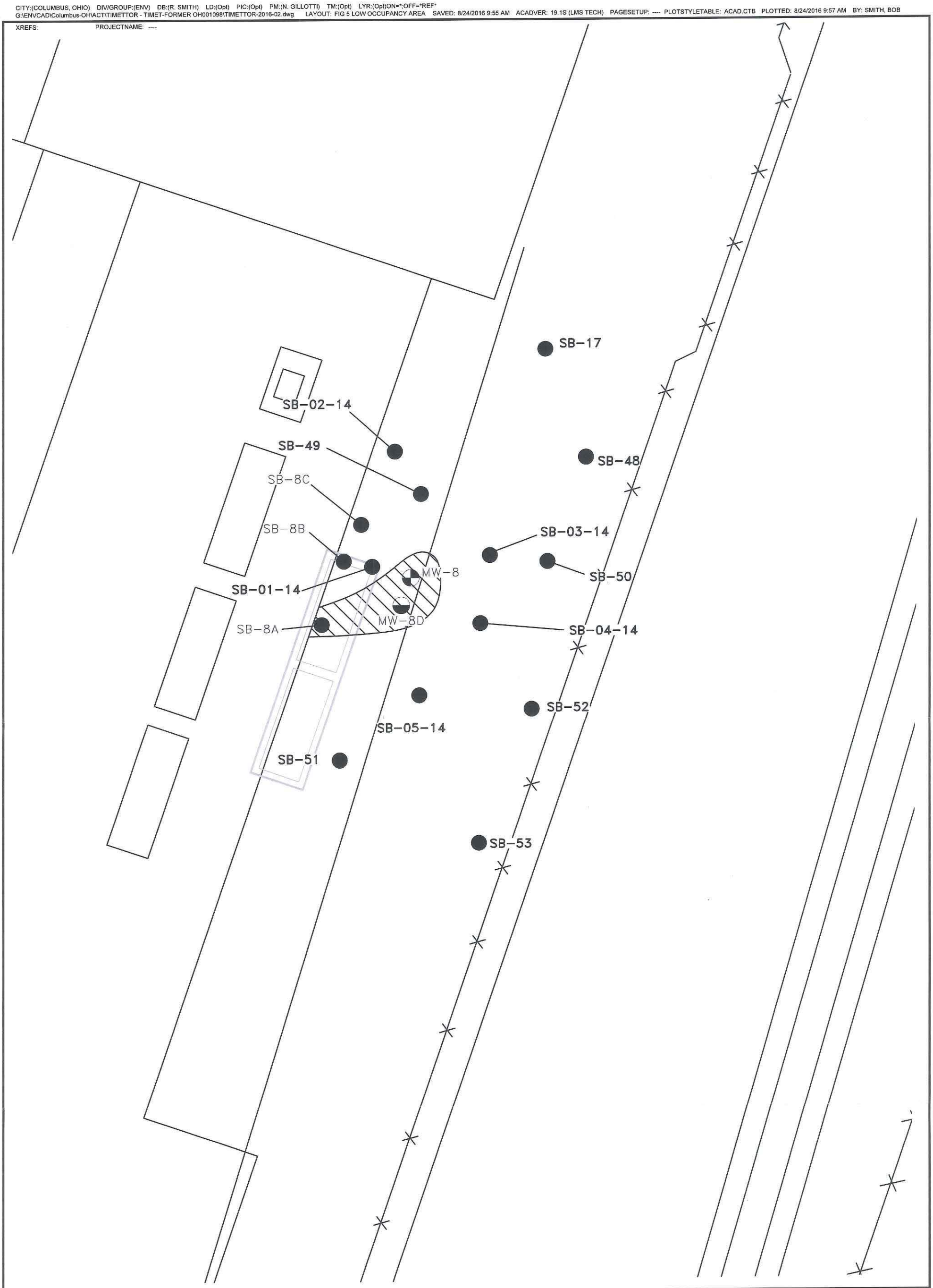
FIGURE
4

CITY:(COLUMBUS, OHIO) DIV/GROUP:(ENV) DB:(R. SMITH) LD:(Opt) PIC:(Opt) PM:(N. GILLOTTI) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Columbus-OH\ACT\TIMETTOR - TIMET-FORMER OH001098\TIMETTOR-2016-02.dwg LAYOUT: FIG 5 LOW OCCUPANCY AREA SAVED: 8/24/2016 9:55 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ACAD.CTB PLOTTED: 8/24/2016 9:57 AM BY: SMITH, BOB
XREFS: PROJECTNAME: ----



LEGEND

- MONITORING WELL (SHALLOW)
- MONITORING WELL (DEEP)
- PRODUCTION WELL
- SOIL BORING
- EXPECTED LOW OCCUPANCY AREA– PCBs >10 ppm

N

0 10 20 FT

PLOT SCALE: 1" = 20'

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EXPECTED LOW-OCCUPANCY AREA BOUNDARY

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FIGURE
5

ATTACHMENT 1

Self-Implementation Plan Certification

Certification Statement – Party Conducting Cleanup

Owner: Titanium Metals Corporation

Party Conducting Cleanup: Titanium Metals Corporation

Project: Timet Toronto, Ohio
Former Oil House/Maintenance Shop Area
Remediation of PCB-Impacted Soil

I, Thomas Bottorf, hereby certify, that all sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the presence, concentrations, and extent of polychlorinated biphenyl- (PCB-) impacted media for the area of the former oil house at the TIMET facility in Toronto, Ohio are on file and available for USEPA inspection at the following location:

Arcadis U.S., Inc.
200 E. Campus View Blvd., Suite 200
Columbus, Ohio 43235
Contact: Eric M. Showalter

By: _____

Thomas Bottorf
Titanium Metals Corporation

Date: 9/9/16